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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/722,591	11/28/2000	Edward J. Dalgewicz III	04756.00006	5236

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EXAMINER	
MADSEN, ROBERT A	

ART UNIT	PAPER NUMBER
1761	

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/722,591	DALGEWICZ, EDWARD J.	
	Examiner	Art Unit	
	Robert Madsen	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,22-29,38-47,78 and 79* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,22-29,38-47,78 and 79* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on august 4, 2003 has been entered. Claims1-12,22-29,38-47,78,79 remain pending in the application. Claims 13-21,30-37, and 48-77 have been canceled.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 5219665) in view of Weiss et al. (US 3960631), El-Afandi et al. (US 5849401) and Swamikannu et al. (US 5436296).

4. Regarding claims 1-4, there are no structural limitations in the claims and as such any structure comprising the polymeric layers meets the limitations. Chen et al. teach refrigerator liners and other insulated liners made from a first layer of PETG, second layer of copolymer of ethylene and glycidyl methacrylate or a terpolymers with butyl acrylate (in Example 4 in Table 1), and a third layer of polyethylene (Column 3,

lines 39-59,Column 4, lines 7-22,Column 5, lines 15-25,50-55., Column 6, lines 24-35, Column 7, lines 3-15, Example). Chen et al. teach the polyethylene layer is the same as the layer taught by to Weiss et al. , who teach LDPE (Column 2, lines 56-58 of Weiss et al.), and thus Chen et al. , as evidenced by Weis et al. teach LDPE. However, Chen et al. are silent in teaching the first layer comprises a blend of virgin polymer and reprocessed polymeric material from all three layers, as recited in claim 1.

5. El-Afandi et al. is relied on as evidence of the conventionality of reprocessing scrap from a multilayer thermoformed container and adding a portion of this reprocessed multilayer composition to a particular layer of the thermoformed container to keep the economics favorable (Column 5, lines 35-41, Column 7, line 62 to Column 8, line 10, Column 10, lines 22-35

6. Swamikannu et al. teach a polyalkylene terephthalate and polyethylene normally cannot be blended together. However, Swamikannu et al. teach blends comprising at least 75% polyalkylene terephthalate can be blended in virgin or reprocessed form when a compatibilizer such as a copolymer of ethylene and glycidyl methacrylate is present (Column 1, lines 10-15,Column 3, lines 52-60, Column 4, lines 27-60,Column 4, line 60 to Column 5, line 47).

7. Therefore, it would have been obvious to add a blend of virgin polymer and reprocessed polymeric material comprising all the layers since El-Afandi et al. teach it was well known to recycle multilayer thermoformed scrap into multilayer thermoformed containers because of the economic impact. Furthermore, it would have been obvious to add a blend of virgin polymer and reprocessed polymeric materials to the first layer,

since (1) Swamikannu et al. teach polymeric blends of virgin and/or reprocessed polyalkylene terephthalate (e.g. the first layer) and polyethylene (e.g. the third layer) are most compatible in compositions including a copolymer of ethylene and glycidyl methacrylate (e.g. in the second layer) and wherein the level of polyalkylene terephthalate is at least 75% and (2) the layer which would provide the greatest amount of polyalkylene terephthalate is the first layer.

8. Claims 39-42,78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 5219665) in view of Weiss et al. (US 3960631), El-Afandi et al. (US 5849401) and Swamikannu et al. (US 5436296).

9. Regarding claims 39-42,78, the limitations require a flange and body portion and three polymeric layers. Chen et al. teach refrigerator liners and other insulated liners that are thermoformed in the same manner of trays. Chen et al. teach first layer of PETG, second layer of copolymer of ethylene and glycidyl methacrylate or a terpolymers with butyl acrylate (in Example 4 in Table 1), and a third layer of polyethylene (Column 3, lines 39-59,Column 4, lines 7-22,Column 5, lines 15-25,50-55., Column 6, lines 24-35, Column 7, lines 3-15, Example). Chen et al. teach the polyethylene layer is the same as the layer taught by to Weiss et al. , who teach LDPE (Column 2, lines 56-58 of Weiss et al.), and thus Chen et al. , as evidenced by Weis et al. teach LDPE. Chen et al. are silent in explicitly teaching the particular polymeric layers are part of a structure comprising a flange and a bottom and the first layer

comprises a blend of virgin polymer and reprocessed polymeric material from all three layers as recited in claims 39 and 78.

10. With respect to the particular container shape, Weiss et al. further teaches insulated liners for containers and shows a flange and bottom structure (See figure 3). Therefore, it would have been obvious to include a flange and bottom structure for the liner of Chen et al. since (1) Chen et al. teach the trays may be thermoformed, (2) Chen et al. teach the thermoformed material may be used as an insulated liner and (3) Weiss et al. teach insulated liners in a tray (i.e. flange with a bottom structure). One would have been substituting one multilayer thermoformed container shape for another for the same purpose.

11. With respect to reprocessing, El-Afandi et al. is relied on as evidence of the conventionality of reprocessing scrap from a multilayer thermoformed container and adding a portion of this reprocessed multilayer composition to a particular layer of the thermoformed container to keep the economics favorable (Column 5, lines 35-41, Column 7, line 62 to Column 8, line 10, Column 10, lines 22-35).Swamikannu et al. teach a polyalkylene terephthalate and polyethylene normally cannot be blended together. However, Swamikannu et al. teach blends comprising at least 75% polyalkylene terephthalate can be blended in virgin or reprocessed form when a compatibilizer such as a copolymer of ethylene and glycidyl methacrylate is present (Column 1, lines 10-15,Column 3, lines 52-60, Column 4, lines 27-60,Column 4, line 60 to Column 5, line 47).

12. Therefore, it would have been obvious to add a blend of virgin polymer and reprocessed polymeric material comprising all the layers since El-Afandi et al. teach it was well known to recycle multilayer thermoformed scrap into multilayer thermoformed containers because of the economic impact. Furthermore, it would have been obvious to add a blend of virgin polymer and reprocessed polymeric materials to the first layer, since (1) Swamikannu et al. teach polymeric blends of virgin and/or reprocessed polyalkylene terephthalate (e.g. the first layer) and polyethylene (e.g. the third layer) are most compatible in compositions including a copolymer of ethylene and glycidyl methacrylate (e.g. in the second layer) and wherein the level of polyalkylene terephthalate is at least 75% and (2) the layer which would provide the greatest amount of polyalkylene terephthalate is the first layer.

13. Claims 1-9,12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al. (US 6333094) in view of El-Afandi et al. (US 5849401) and Swamikannu et al. (US 5436296).

14. Regarding claims 1-9,12, Schneider et al. teach thermoforming a multilayer film comprising a terephthalate layer (having a degree of crystallinity of less than about 15% as recited in 12), including PET, a grafted copolymer of ethylene and glycidyl methacrylate layer, and a LLPDE or LDPE layer as recited in claims 1-6. Schneider et al. is also teach using terpolymers of ethylene, a glycidyl acrylate and methacrylate with 8% glycidyl acrylate in the copolymer and 2-8% glycidyl acrylate in the terpolymer as recited in claims 7-9 (See Column 1 line 55 to Column 2, line 22Column 3, lines24-29,

Column 4, lines 8-16 and 24-41,Column 5, line 66 to Column 6, line 8. and Examples (which teach PET and amorphous PETG). However, Schneider et al. are silent in teaching the first layer comprises a blend of virgin polymer and reprocessed polymeric material from all three layers, as recited in claim 1.

15. El-Afandi et al. is relied on as evidence of the conventionality of reprocessing scrap from a multilayer thermoformed container and adding a portion of this reprocessed multilayer composition to a particular layer of the thermoformed container to keep the economics favorable (Column 5, lines 35-41, Column 7, line 62 to Column 8, line 10, Column 10, lines 22-35).

16. Swamikannu et al. teach a polyalkylene terephthalate and polyethylene normally cannot be blended together. However, Swamikannu et al. teach blends comprising at least 75% polyalkylene terephthalate can be blended in virgin or reprocessed form when a compatibilizer such as a copolymer of ethylene and glycidyl methacrylate is present (Column 1, lines 10-15,Column 3, lines 52-60, Column 4, lines 27-60,Column 4, line 60 to Column 5, line 47).

17. Therefore, it would have been obvious to add a blend of virgin polymer and reprocessed polymeric material comprising all the layers since El-Afandi et al. teach it was well known to recycle multilayer thermoformed scrap into multilayer thermoformed containers because of the economic impact. Furthermore, it would have been obvious to add a blend of virgin polymer and reprocessed polymeric materials to the first layer, since (1) Swamikannu et al. teach polymeric blends of virgin and/or reprocessed polyalkylene terephthalate (e.g. the first layer) and polyethylene (e.g. the third layer)

are most compatible in compositions including a copolymer of ethylene and glycidyl methacrylate (e.g. in the second layer) and wherein the level of polyalkylene terephthalate is at least 75% and (2) the layer which would provide the greatest amount of polyalkylene terephthalate is the first layer.

18. Claims 1-11,22-29,38-46,78,79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blemberg et al. (US 5424347) in view of Wakabayashi et al. (US 6355336 B1) , Schneider et al. (US 6333094 B1) El-Afandi et al. (US 5849401) and Swamikannu et al. (US 5436296).

19. Regarding claims 1-11, 39-46,78, Blemberg et al. teach the conventional thermoformed food tray used for microwave treatment of foods that comprises a multi-layer film formed by a or polyvinylidene chloride resin wherein the multilayer sheet is 20-200 mils for forming a tray (Abstract, Column 4, line 50 to Column 5, line 32). However, Blemberg et al. are silent in teaching the multilayer sheet with the recited three-layer composition, and the first layer comprises a blend of virgin polymer and reprocessed polymeric material from all three layers, as recited in claims 1, 39, and 78.

20. With respect to the recited compositions, Wakabayashi et al. teach a three layer resin which is an improvement over the conventional polyvinyl chloride or polyvinylidene chloride resins used in conventional microwave food applications that tend to rupture .denatured or damage during high temperature treatments in microwave heating of foods (Column 1, lines 5-40). Wakabayashi et al. teach a microwavable film for use with foods that comprises a first layer of copolymerized PBT, second layer of

grafted copolymer of ethylene and glycidyl methacrylate, and a third layer of HDPE, LLDPE or LDPE as recited in claims 1-6,10,11, 39-44, and 78(See Column 2, lines 21-40, column 3, lines Column 4, lines 20-30 and lines 54-58, Column See Column 5, lines 1-43, Column 7, lines 49-57, Column 8, lines 1-43, Column 9, line 59 to Column 10, line 26,Examples.). Wakabayashi et al. teach during use in the microwave with food and do show some distortion (i.e. haze), as recited in claims 45 and 46(See Examples and Column 7, line58- Column 8, line 21).

21. Schneider et al. is relied on as further evidence of the conventionality of thermoforming a multilayer film comprising a terephthalate layer and further teaches PET, a grafted copolymer of ethylene and glycidyl methacrylate layer, and a LLPDE or LDPE layer. Schneider et al. is also relied on as further evidence of the conventionality of using terpolymers of ethylene, a glycidyl acrylate and methacrylate with 8% glycidyl acrylate in the copolymer and 2-8% glycidyl acrylate in the terpolymer as recited in claims 7-9 (See Column 1 line 55 to Column 2, line 22Column 3, lines24-29, Column 4, lines 8-16 and 24-41,Column 5, line 66 to Column 6, line 8. and Examples (which teach PET and amorphous PETG).

22. Therefore, it would have been obvious to modify Blemberg et al. and use the film of Wakabayashi et al. (i.e. with first layer of copolymerized PBT, second layer of grafted copolymer of ethylene and glycidyl methacrylate, and a third layer of LLDPE or LDPE) to form a tray for microwave heating a food item since (1) Wakabayshi et al. teach the film is an improvement over polyvinylidene chloride based films and (2) one would have been substituting one conventional multilayer film for another for the same

purpose: treating food in the microwave. It would have been further obvious that the film would distort to some extent (i.e. haze) as recited in claim 45, since Wakabayashi teaches some hazing occurs. It would have been further obvious to include terpolymers for a second layer such as ethylene, a glycidyl acrylate and methacrylate, and methacrylate with 8% glycidyl acrylate in the copolymer and 2-8% glycidyl acrylate in the terpolymer as recited in claims 7-9, since Schneider et al. teach these as suitable polymers and compositions of ethylene-glycidyl acrylate polymers for thermoformed sheets and one would have been substituting conventional types of polymers for the same purpose.

23. With respect to reprocessing, El-Afandi et al. is relied on as evidence of the conventionality of reprocessing scrap from a multilayer thermoformed container and adding a portion of this reprocessed multilayer composition to a particular layer of the thermoformed container to keep the economics favorable (Column 5, lines 35-41, Column 7, line 62 to Column 8, line 10, Column 10, lines 22-35).Swamikannu et al. teach a polyalkylene terephthalate and polyethylene normally cannot be blended together. However, Swamikannu et al. teach blends comprising at least 75% polyalkylene terephthalate can be blended in virgin or reprocessed form when a compatibilizer such as a copolymer of ethylene and glycidyl methacrylate is present (Column 1, lines 10-15,Column 3, lines 52-60, Column 4, lines 27-60,Column 4, line 60 to Column 5, line 47).

24. Therefore, it would have been obvious to add a blend of virgin polymer and reprocessed polymeric material comprising all the layers since El-Afandi et al. teach it

was well known to recycle multilayer thermoformed scrap into multilayer thermoformed containers because of the economic impact. Furthermore, it would have been obvious to add a blend of virgin polymer and reprocessed polymeric materials to the first layer, since (1) Swamikannu et al. teach polymeric blends of virgin and/or reprocessed polyalkylene terephthalate (e.g. the first layer) and polyethylene (e.g. the third layer) are most compatible in compositions including a copolymer of ethylene and glycidyl methacrylate (e.g. in the second layer) and wherein the level of polyalkylene terephthalate is at least 75% and (2) the layer which would provide the greatest amount of polyalkylene terephthalate is the first layer.

25. Regarding claim 22,27-29, 38,79, Blemberg teaches the sheet must be 20-200 mils for thermoforming into a tray, but is silent in teaching any particular stretch ratio in claim 22 and 78, or the particular thickness of each layer as recited in claims 22,27-29,38,79. However, Wakabayshi et al. teach the grafted copolymer of ethylene and glycidyl methacrylate layer should be 5-30% of the thickness of the film and the terephthalate layer is 20-80% of the thickness of the film, which would result in a first layer of 4-160 mils and a second layer of 0.1 to 60 mils.. Furthermore, Wakabayashi et al. teach the film is stretched 2-6 times in the machine direction and 0-3 times, which overlaps the range of 1.5 to 3.1 recited in claim 22 in the transverse direction (Column 5, line 59-Column 6, line 5, Column 7, lines 30-38)

26. Therefore it would have been obvious to have been obvious to select a first layer of any thickness between 5mil and 35 mil, a second layer of between 0.1 and 2 mil as recited in claims 22,26, 27,79 and 38, since Blemberg teaches 20-200 mil films and

Wakabayshi teaches the conventional percentages of these two layers in a film intended to replace the film of Blemberg. It also would have been obvious to use a stretch ratio from 1.5:1 to 3:1, since this was the preferred region taught by Wakabayshi for the film intended to replace the film of Blemberg. With respect to the particular thickness of the third layer as recited in claims 22 ,38,29, and 79, to select any particular range between 1 and 5 mils would have been an obvious result effective variable of the number of additional layers added since (1) Wakabayshi teach more than three layers, (2) Wakabayshi teach the preferred relative thickness of the first and second layers and (3) Blemberg teach the preferred overall thickness of the film (i.e. it can be anywhere from 20-200 mil).

27. Claims 23 ,24, and 26, share the same limitations as claims 3 4, and 10, respectively, previously addressed/rejected above.

28. Regarding claim 25, Blemberg et al. is silent in teaching essentially a PET co-polymer. Wakabayshi teach essentially a PBT co-polymer and Schneider et al. teach essentially a PET co-polymer (See the discussion above for the rejection of claims1-6,10,11, 39-46,78). Therefore, it would have been obvious once, it was known to use essentially one type of terephthalate co-polymer to use PET since one would have been substituting one conventional terephthalate co-polymer for another for a sheet used for thermomolding.

29. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blemberg et al. (US 5424347) in view of Wakabayashi et al. (US 6355336 B1) , Schneider et al. (US 6333094 B1), El-Afandi et al. (US 5849401), and Swamikannu et

al. (US 5436296) as applied to claims 1-11,22-29,38-46,78,79 further in view of Brady et al. (US 5916615).

30. Blemberg et al. modified teach modified atmosphere packaging with low permeability to oxygen for food preparation (See Abstract of Blemberg), but is silent in teaching a cover film of highly elastic polyethylene.. Brady et al. are relied on as evidence of the conventionality of using a multi-layer package that has low permeability to oxygen in combination with a polyethylene containing cover for a modified atmosphere (Column 7, line 62 to Column 9, line 31, Examples).

31. Therefore, it would have been obvious to combine the package of Blemberg et al. modified with a lid stock of polyethylene using modified atmosphere packaging since Brady et al. multi-layer packaging with the same barrier properties having a PE lid stock , and one would have been substituting one form of multi-layer package for another for the same purpose: providing low permeability to oxygen.

Conclusion

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Madsen whose telephone number is (703)305-0068. The examiner can normally be reached on 7:00AM-3:30PM M-F.

33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (703)308-3959. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

34. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0061.

Robert Madsen
Examiner
Art Unit 1761

MILTON I. CANO
SUPERVISORY PATENT EXAMINER
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